

# Final Report

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## **UTILIZATION OF SOCIAL MEDIA FOR ROAD USER'S BEHAVIOR STUDY TARGETING RISK-TAKING YOUNGSTERS AND YOUTHS**

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**UTILIZATION OF SOCIAL MEDIA FOR  
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YOUNGSTERS AND YOUTHS**



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## List of Abbreviations and Acronyms

EFA	Exploratory factor analysis
CFA	Confirmatory factor analysis
SEM	Structural equation modeling
GFI	Goodness-of-fit index

## CHAPTER I INTRODUCTION

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### 1.1 Background

Road accident is most unwanted thing to happen to a road user, though they happen quite every hour. The most unfortunate thing is that we do not learn from our mistakes on road. Most of the road users are quite aware of the general rules and safety measures while using roads but it is only the laxity on part of road users, which cause accidents and crashes.

Main cause of accidents and crashes are due to human errors including:

- (1) Over Speeding
- (2) Drunken Driving
- (3) Distractions to Driver
- (4) Red Light Jumping
- (5) Avoiding Safety Gears like Seat belts and Helmets

In today's world, social media is playing an indispensable role on the learning behavior of youngsters, and youths to achieve sustainable education. The world has become a global village and technology use has made it a smaller world through social media and how it is changing instruction. There has been a study amongst the few to perform a focalized investigation on revealing the relationship between positive and negative characteristics of social media and the learning attitude of university students for sustainable education.

Utilizing social media for Disseminating Active Road Safety Education Messages to Risk-Taking Youngsters and Youths" is of great challenge since it is not yet applicable in Thailand. Education and communication via effective and direct-to-the point messages are key to make road safety message across the right target groups. It is increasingly noticeable that social networking sites and their applications present enormous benefits for as well as risks to youngsters, youths, and university students and their implications on students' psychological adjustment or learning behaviors are not

well understood so far but takes the challenge as an opportunity for ATRANS to explore and gain feedback would be practically useful to road safety research.

## 1.2 Objectives

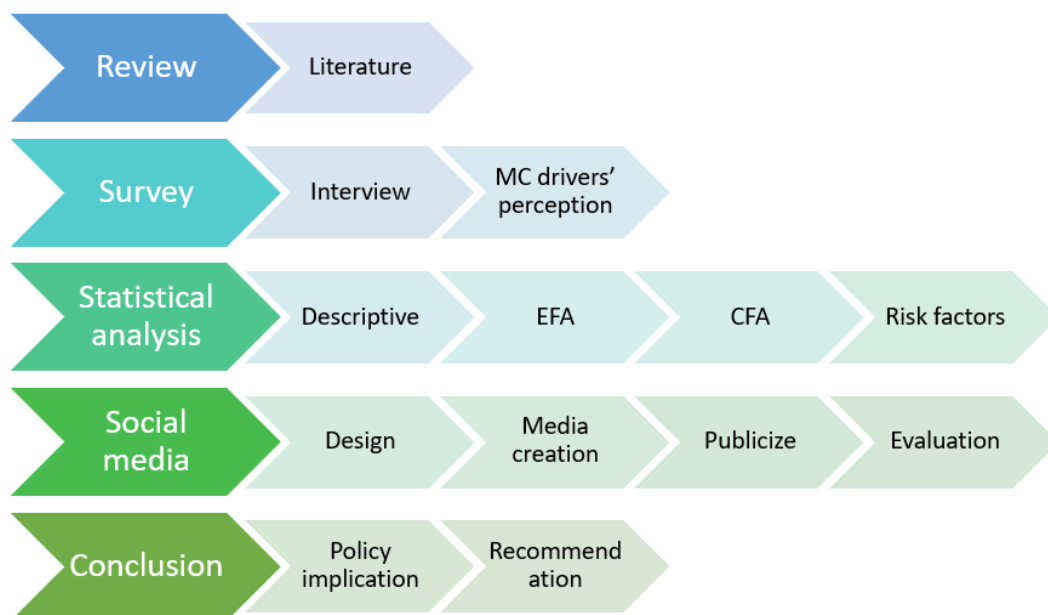
Taking lacking skills for safe driving being the top cause of road fatalities into consideration, this study aims to raise road safety awareness and provide knowledge and technical skills of safe motorcycle driving to the risk-taking youngsters and youth.

Specifically, the objectives of the study are:

- 1) To identify risky perceptions of the risk-taking youngsters and youth motorcycle drivers
- 2) To generate ATRANS-original road safety knowledgeable messages or simulated risk/hazardous situations
- 3) To disseminate and publicize via various social media channels along with other practical activities
- 4) To learn and collect feedback that leads to research and policy implications

## 1.3 Overview of the Study

Overview of the study is summarized in Figure 1.1 .



**Figure 1.1 Overview of the Study**

## CHAPTER 2      TRAFFIC SAFETY AWARENESS

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### 2.1 Traffic Accident

For Thailand, WHO estimated 32.7 fatality rate per 100,000 population in 1996 (World Health Organization Country Office for Thailand, 2020). The past studies in Thailand (Chumpawadee et al., 2015; Puratmaja, 2017; Satiennam et al., 2018) showed that the major motorcycle accident risk behavior among young motorcycle drivers include:

- Using a telephone while driving
- Speeding over the speed limit
- Driving with more than one passenger
- Drunk driving
- Not wearing a helmet
- Making u-turn inappropriately
- Red light running
- Etc.

The same study also reported that drivers having greater knowledge of safe driving were more likely to drive safely. Another study in Khon Kaen, Thailand, interestingly found a positive relationship between correctly fastening the helmet strap with perception of traffic safety risk (Hongsrnagon et al., 2011). These indicated that traffic safety education is important but lacking among young motorcyclist, so need a strong initiative to improve and enhance the awareness and consciousness.

### 2.2 Interview Meeting

An interview meeting with Thai Honda was conducted on August 5<sup>th</sup>, 2021 via Zoom, as the personal meeting was prohibited by the COVID-19 pandemic. A screenshot of the meeting is shown in Figure 2.1. The meeting was very fruitful and provided opportunity to learn the best practice that Thai Honda has been doing to alleviate the traffic safety problem in Thailand during the past decades. Several social media channels were utilized where various knowledge were disseminated to the society including safe motorcycle driving technique, vehicle maintenance, etc.

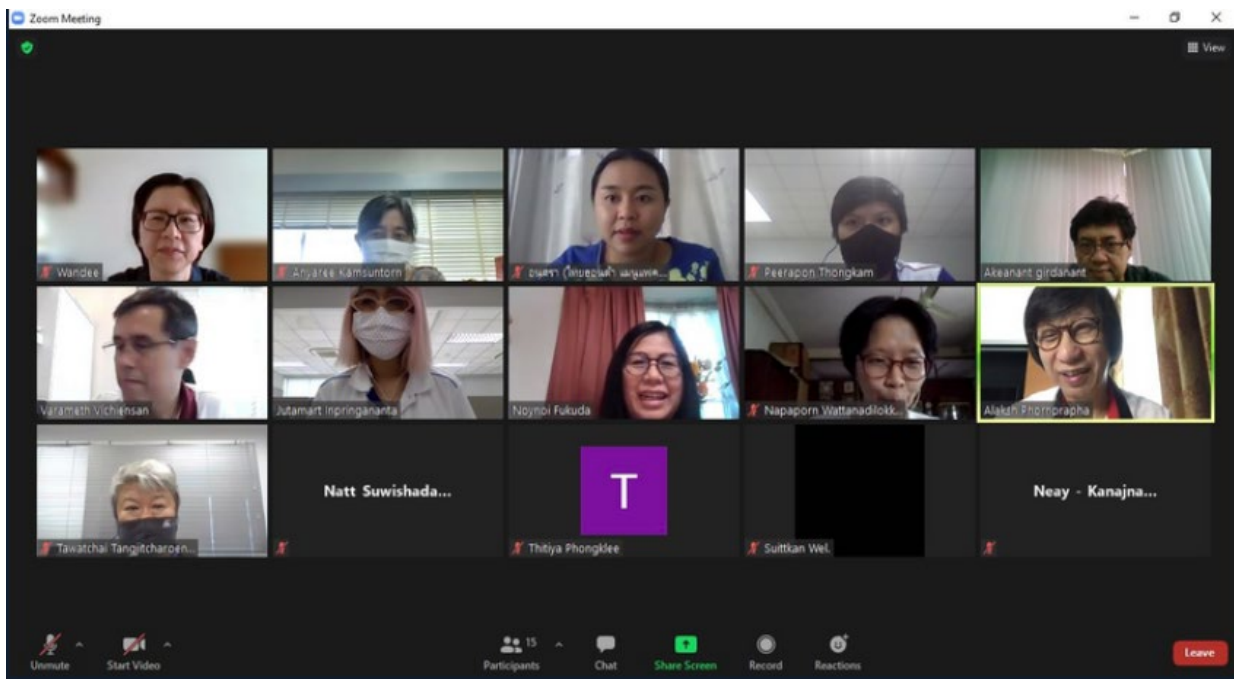


Figure 2.1 Interview Meeting with Thai Honda

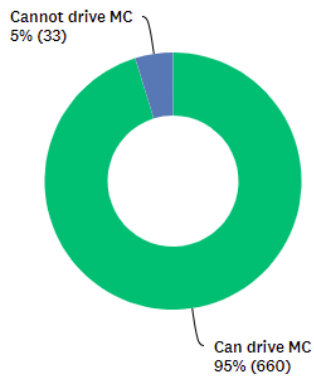
## 2.3 Risk Perception Survey

An online survey was conducted in August 2021, targeting people who drive motorcycle and use social media.

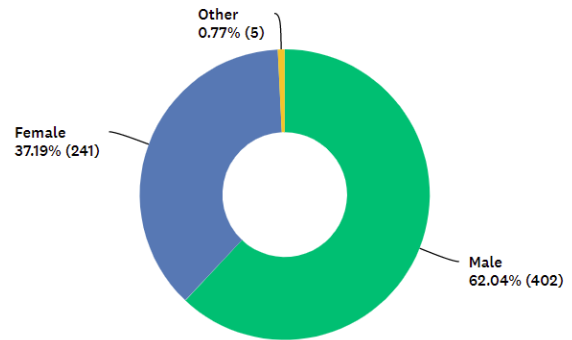
### 2.3.1 Profile of the Sample

The socioeconomic profile of the sample is shown in Figure 2.1. Most of the respondents can drive motorcycle (95%). Gender mix is male 62% and female 37%. Age ranges from young to senior people but the majority is the youngsters, i.e., 68% are 16 to 25 years old. Many of them are students (57%). The current city of living is varying across Thailand, many of them are in Suphanburi and Buriram, as shown in Figure 2.2.

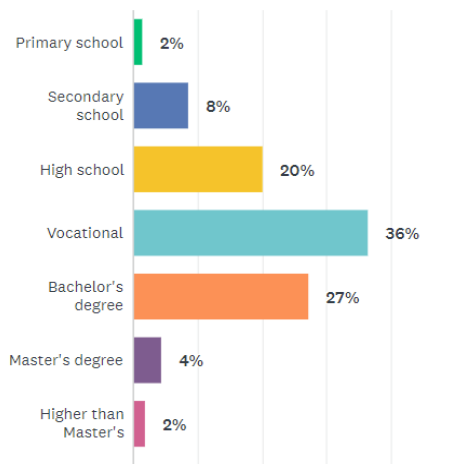
a) Can drive motorcycle



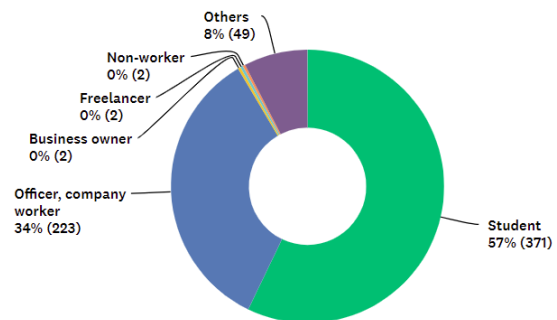
b) Gender



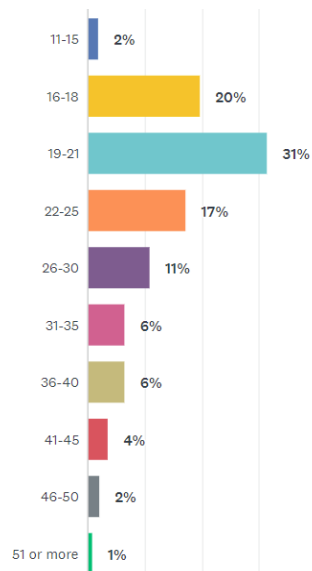
c) Education



d) Occupation



e) Age



f) Personal income

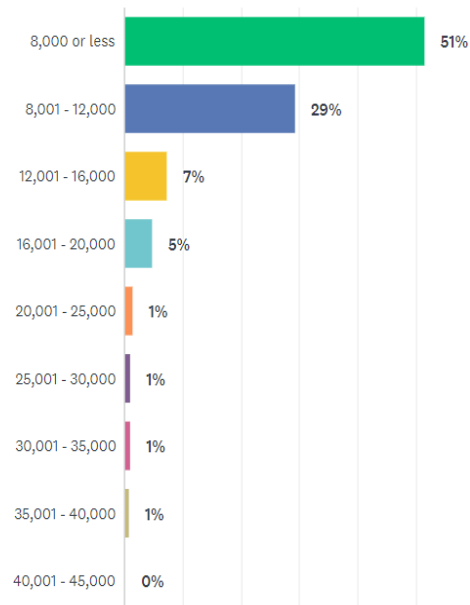
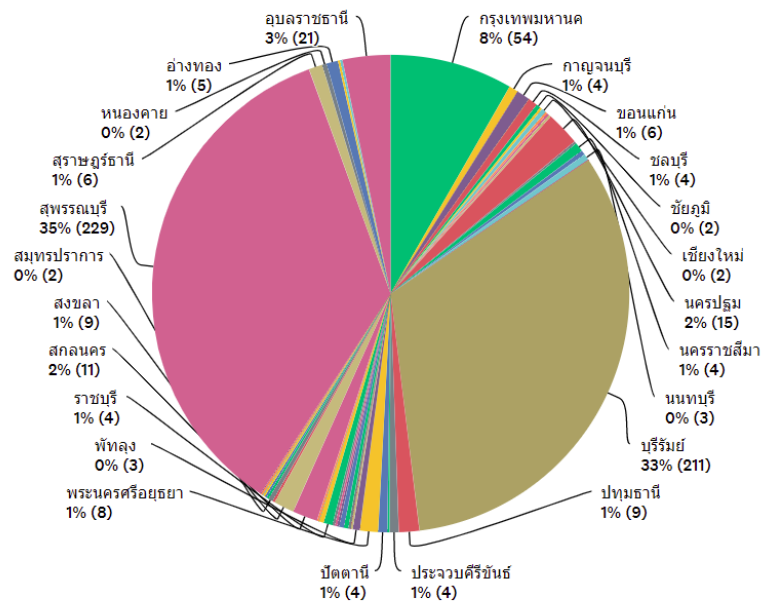


Figure 2.2 Profile of the Sample



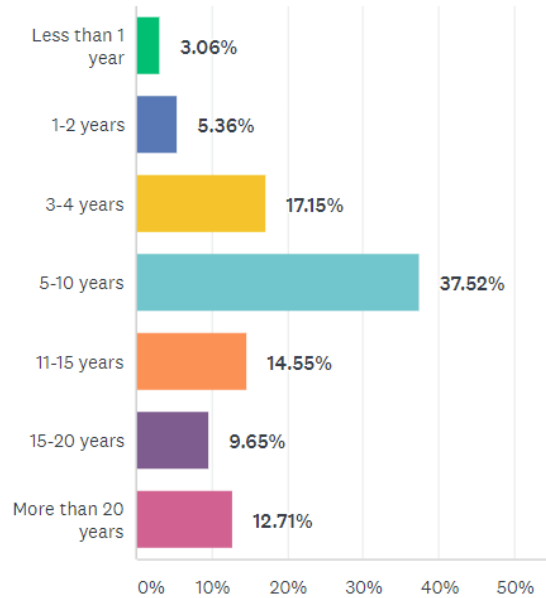


### Figure 2.3 Current city of living

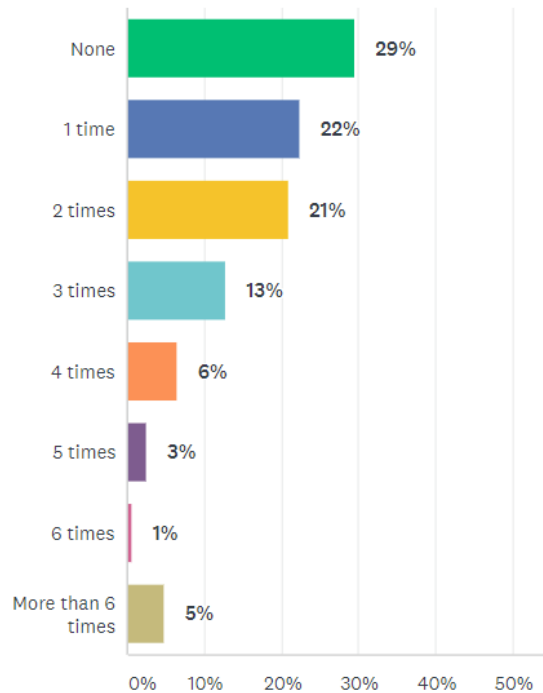
### 2.3.3 Motorcycle Experience

Generally, the samples have long experience in driving motorcycle, i.e., more than 91% have driven for more than 3 years and many of them (more than 70%) are used to get accident, as illustrated in Figure 2.4.

*a) Yeas of motorcycle driving experience*



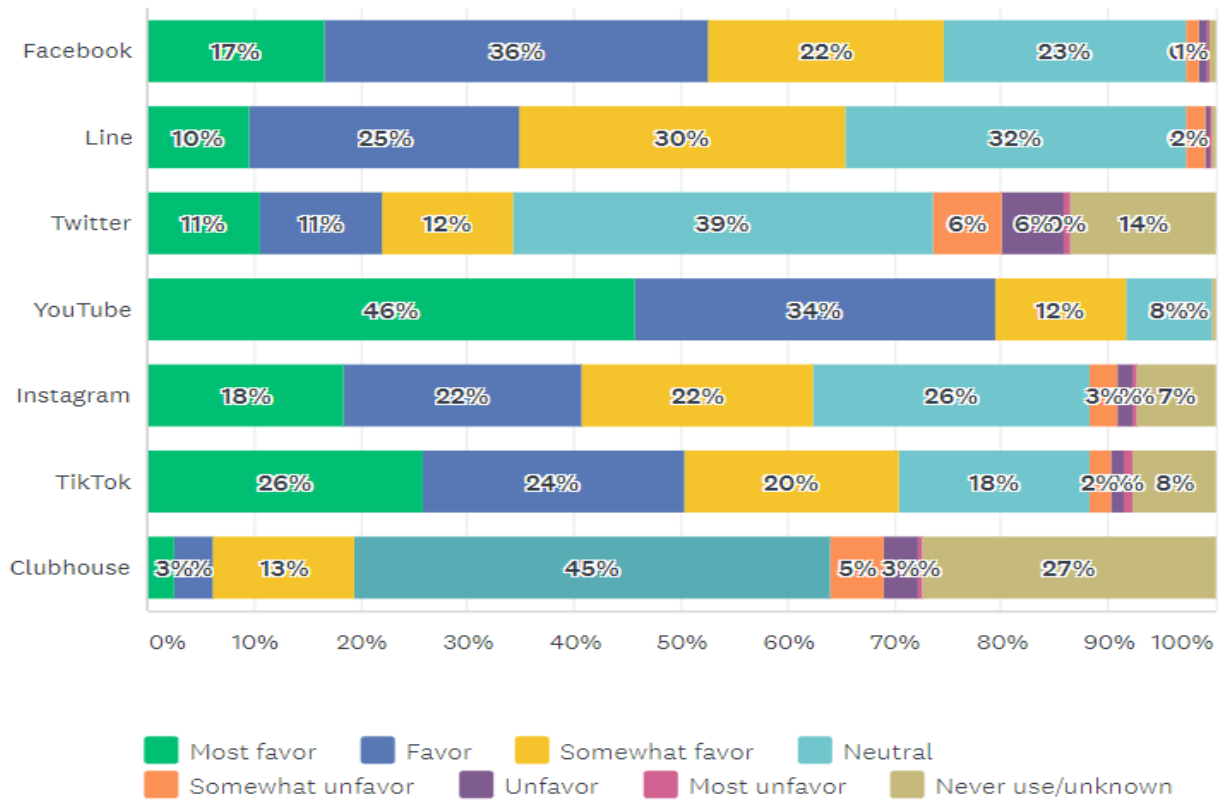
*b) Number of past motorcycle accidents*



**Figure 2.4 Motorcycle Driving Experience**

### 2.3.4 Social Media Usage

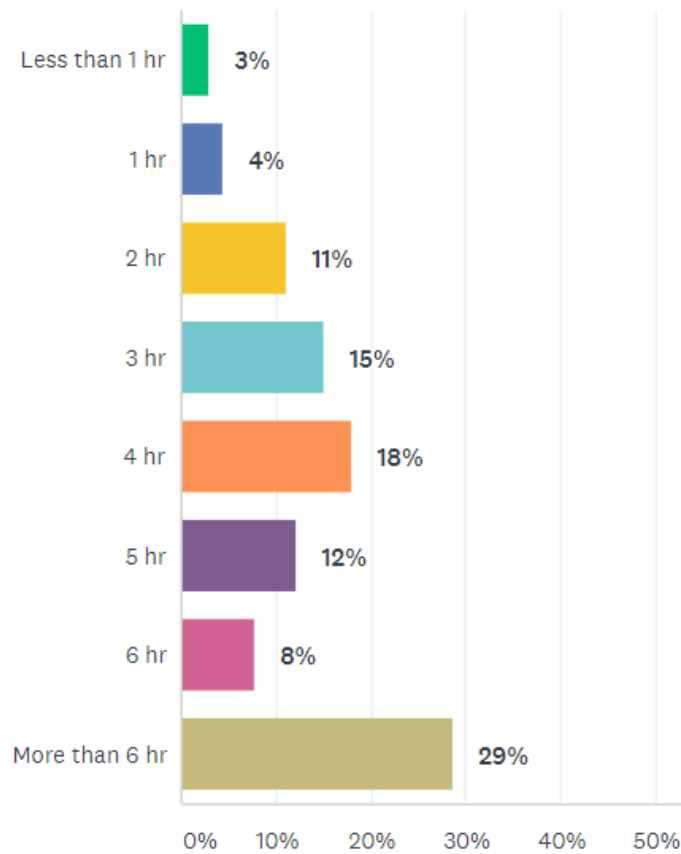
The sample's behavior regarding type of social media, time spent per day and purpose were asked. It is found that social media that has video functionality gain popularity, i.e., YouTube, TikTok, and Instagram as shown in Figure 2.4..



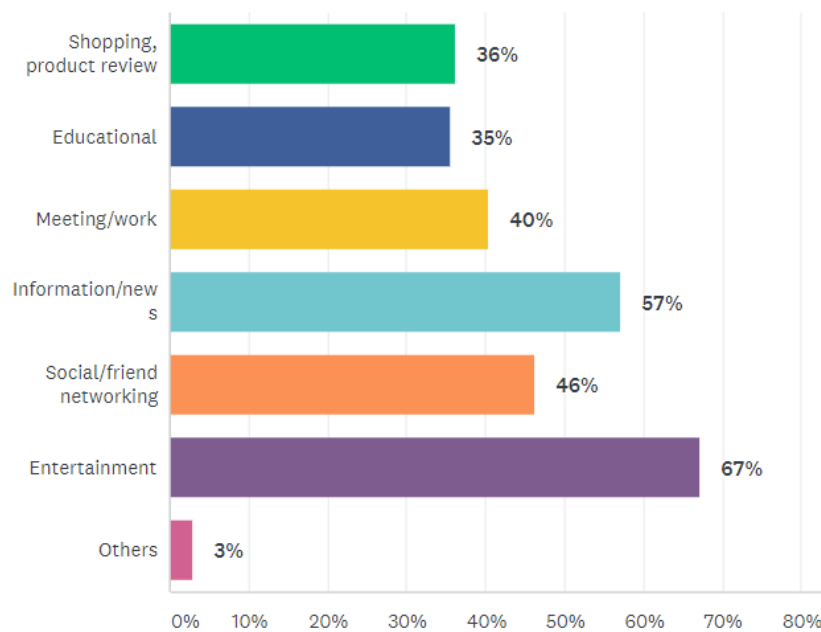
**Figure 2.5 Type of Social media**

It was also found that the respondents spent more than 6 hours per day with social media for various purposes ranging from work- or education-related to entertainment, as shown in Figure 2.6.

*a) Time spent with social media*



*b) Purpose of using social media*



**Figure 2.6 Social Media Usage Behavior**

### 2.3.5 Risk Perception

The respondents were asked to express their perceptions on twenty seven (27) statement related to factors associated with causes of motorcycle accident. The evaluations were on 7-point Likert scale (definitely agree = 7, agree = 6, somewhat agree = 5, neutral = 4, somewhat disagree = 3, disagree = 2, and definitely disagree =1). The results are shown in Figure 2.7 to Figure 2.9 respectively.

#### 1) Driving Behavior

As clearly shown in Figure 2.7, the counter-flow driving, red-light running, yellow-right running as well as dangerous overtaking were found highly perceived as risky driving behavior. However, speeding of more than 90 km/hour, riding with more than one passenger, and driving on shoulder or sidewalk were not perceived very high.

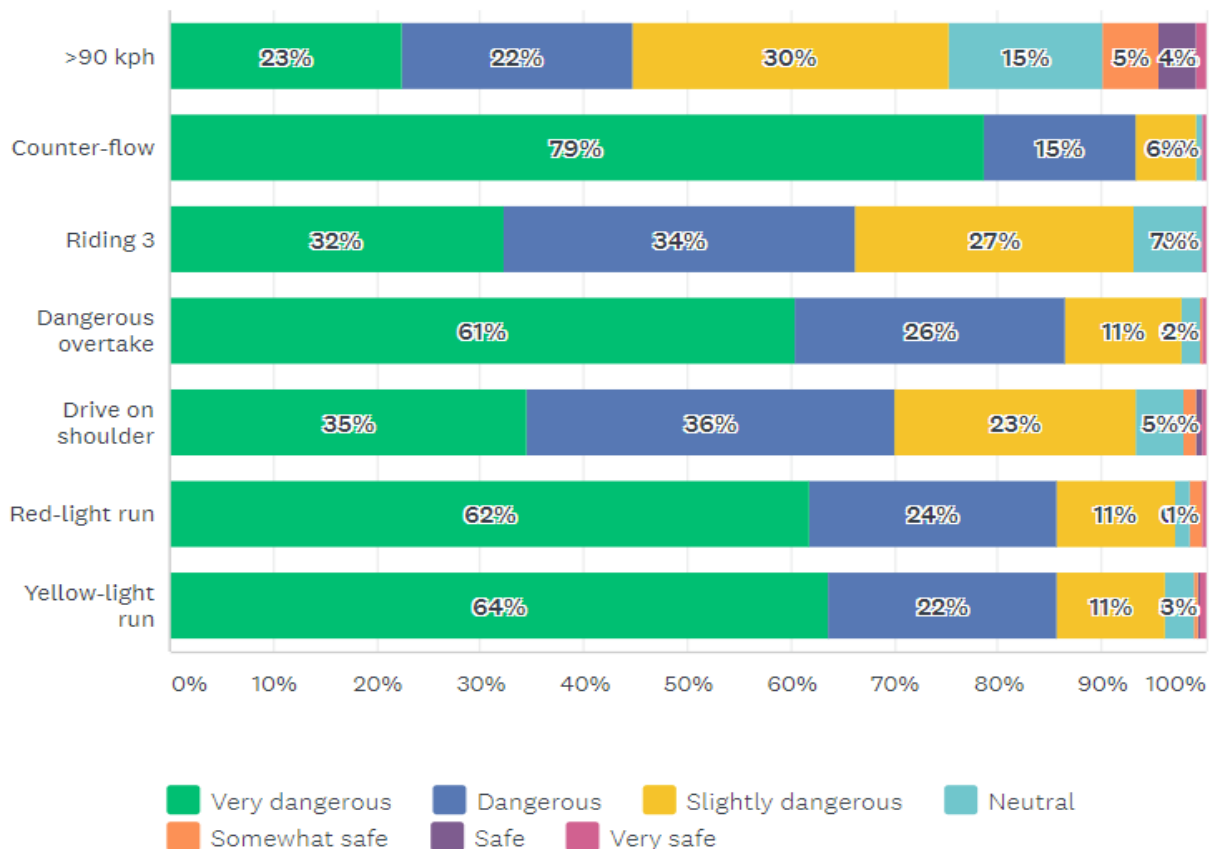


Figure 2.7 Risk Perception Regarding Driving Behavior

## 2) Fitness to Drive

Driver's fitness as well as consciousness were perceived differently, as shown in Figure 2.8. Drunk driving was well accepted as very dangerous, while drowsy driver or driving while doing other things such as talking or navigating a map on mobile phone or holding umbrella while driving was regarded as high risk. In contrast, drink and drive was not perceived as very risky behavior.

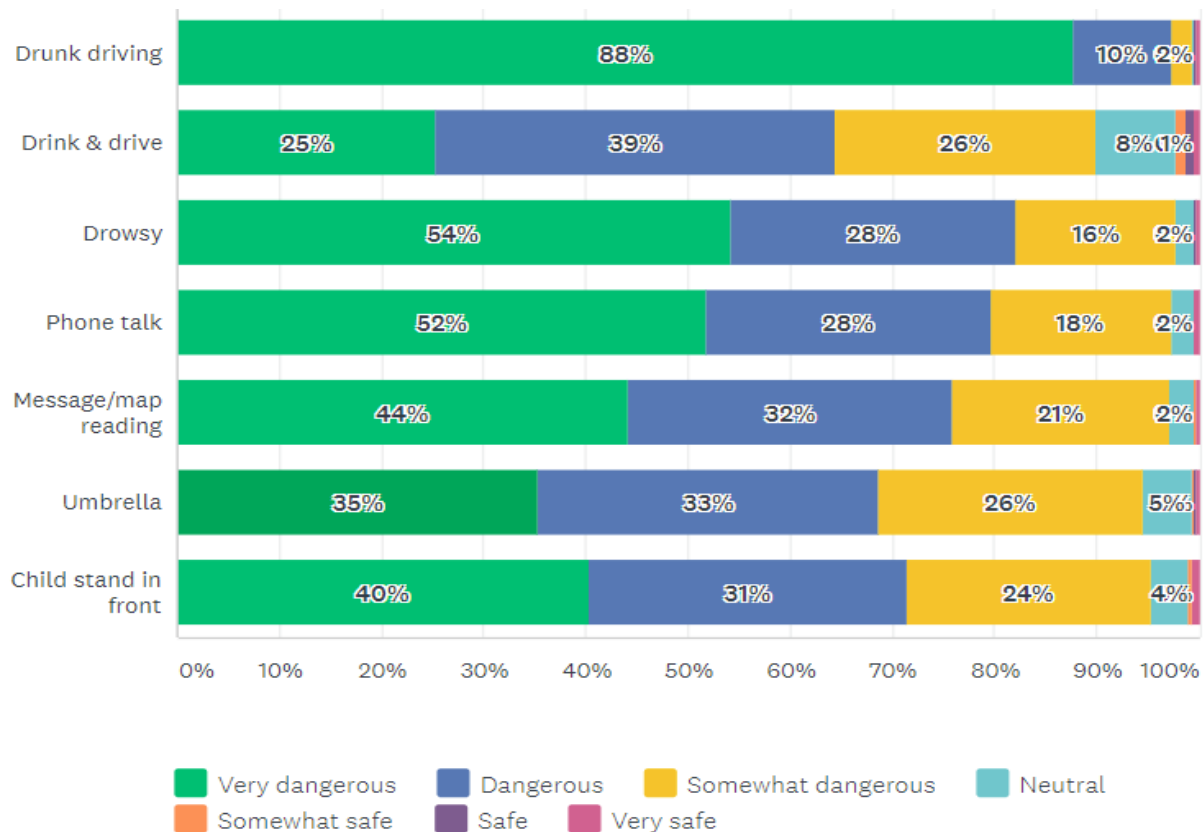
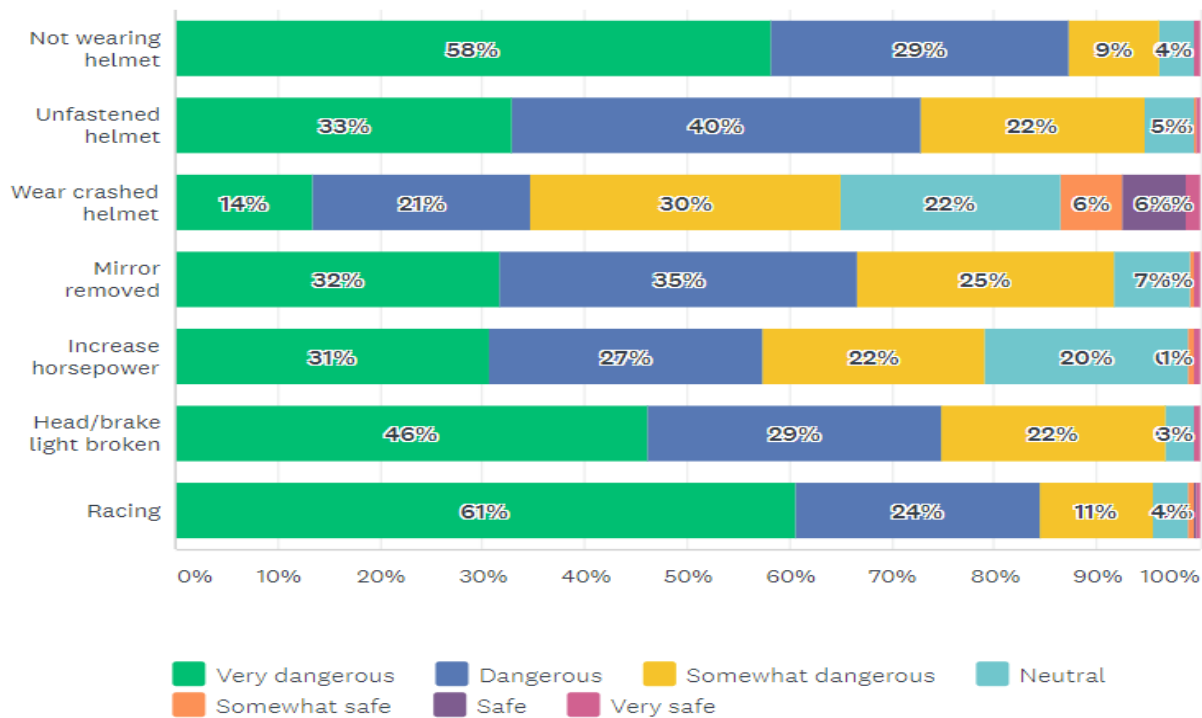


Figure 2.8 Risk Perception Regarding Driver's Fitness to Drive

## 3) Vehicle and Safety Equipment

The respondents perceived that not wearing helmet and racing on road are dangerous



**Figure 2.9 Risk Perception Regarding Vehicle Road Worthiness**

## 2.4 Statistical Analysis

### 2.4.1 Method

By using the data obtained from the passenger interview survey, the following analyses were conducted. Firstly, an exploratory factor analysis (EFA) with principal component extraction and factor rotation was conducted by using IBM SPSS Statistics 27 software to examine the underlying structure of the factors. The Kaiser–Meyer–Olkin (KMO) was determined ( $>0.8$ ) and Bartlett’s test of sphericity was conducted (the p-value of the chi-square statistics in the hypothesis test must be less than 0.05), for testing suitability of the data analysis (Hair et al., 2019). Factor loading values of 0.30 to 0.40 were considered to meet the minimal level for interpretation of structure; the values of 0.50 or greater were practically significant, while the values exceeding 0.70 were indicative of well-defined structure (Hair et al., 2019). Cross-loading items were eliminated (Hair et al., 2019). Communality, which is the proportion of variable’s variance explained by its loadings on the factors, was calculated as the sum of the squared loadings across the factors. It identifies the strength of the factors in explaining each variable; a high variable

communality ( $>0.50$ ) indicated a set of factors that could explain much of the variance of the variable and justify keeping the variable (Hair et al., 2019). Reliability of the model was evaluated by Cronbach's alpha ( $>0.7$ ).

Secondly, a confirmatory factor analysis (CFA) was conducted by using IBM SPSS AMOS 27 software to validate the measurement models of the latent constructs identified through the EFA. The goodness-of-fit of the estimated model was evaluated and the validity of construct was examined. Construct reliability ( $>0.7$ ) and average variance extracted ( $>0.5$ ) were determined. Thirdly, a structural equation model (SEM) was developed by using IBM SPSS AMOS 27 software to examine the relationship between the latent constructs. The overall model fit was evaluated through several recommended goodness-of-fit statistics and indices (Hair et al., 2019). As absolute fit indices, the Chi-square ( $\chi^2$ ) statistic was determined to evaluate the fit between the observed and estimated covariance matrices. As the Chi-squared test is sensitive and biased to sample size, the value is larger with a larger sample size. The normed Chi-square was then determined as a ratio of  $\chi^2$  to the degrees of freedom for a model (CMIN/df) ( $<5.0$ ). The goodness-of-fit index (GFI), which evaluates the proportion of variance in the sample variance–covariance matrix ( $>0.9$ ). As an incremental fit indicator, the comparative fit index (CFI) was determined ( $>0.9$ ). As a badness-of-fit index, the root mean square error of approximation (RMSEA) was determined; a value  $< 0.08$  indicates a good fit (Hair et al., 2019).



### 2.4.3 Descriptive Statistics

The descriptive statistics of the data is presented in Table 2.1.

**Table 2.1 Descriptive Statistics**

	Min.	Max.	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Age	13	48	24.08	7.832	1.286	0.099	0.910	0.198
MCDrvYear	1	7	4.34	1.469	0.205	0.099	-0.284	0.198
MCAccident	1	8	2.80	1.820	1.234	0.099	1.220	0.198
Faster90kph	1	7	5.28	1.360	-0.634	0.099	0.073	0.198
CounterFlow	4	7	6.72	0.594	-2.098	0.099	3.743	0.198
ManyPssngr	4	7	5.92	0.918	-0.348	0.099	-0.866	0.198
DangerousPassing	3	7	6.47	0.770	-1.370	0.099	1.321	0.198
WalkwayShoulder	2	7	5.96	0.988	-0.910	0.099	1.012	0.198
RedLightRun	3	7	6.45	0.833	-1.645	0.099	2.709	0.198
YellowLightRun	1	7	6.47	0.852	-1.952	0.099	5.043	0.198
FeelDrunken	4	7	6.86	0.426	-3.379	0.099	12.549	0.198
DrinkDriver	1	7	5.78	1.027	-0.948	0.099	1.687	0.198
DrowsyHeadache	3	7	6.35	0.820	-1.004	0.099	0.104	0.198
MobilePhoneTalk	4	7	6.29	0.838	-0.826	0.099	-0.425	0.198
MessageMapLook	4	7	6.18	0.857	-0.600	0.099	-0.747	0.198
Umbrella	3	7	6.00	0.916	-0.472	0.099	-0.654	0.198
ChildStanding	1	7	6.08	0.929	-0.810	0.099	0.776	0.198
NoHelmet	4	7	6.44	0.800	-1.403	0.099	1.347	0.198
UnfastenHelmet	3	7	6.02	0.876	-0.536	0.099	-0.432	0.198
CrashedHelmet	1	7	4.91	1.400	-0.452	0.099	-0.169	0.198
MirrorRemoved	3	7	5.90	0.959	-0.445	0.099	-0.654	0.198
PowerUpEngine	1	7	5.66	1.149	-0.334	0.099	-0.887	0.198
LightsBroken	1	7	6.17	0.909	-0.888	0.099	0.848	0.198
Racing	2	7	6.40	0.883	-1.512	0.099	1.999	0.198

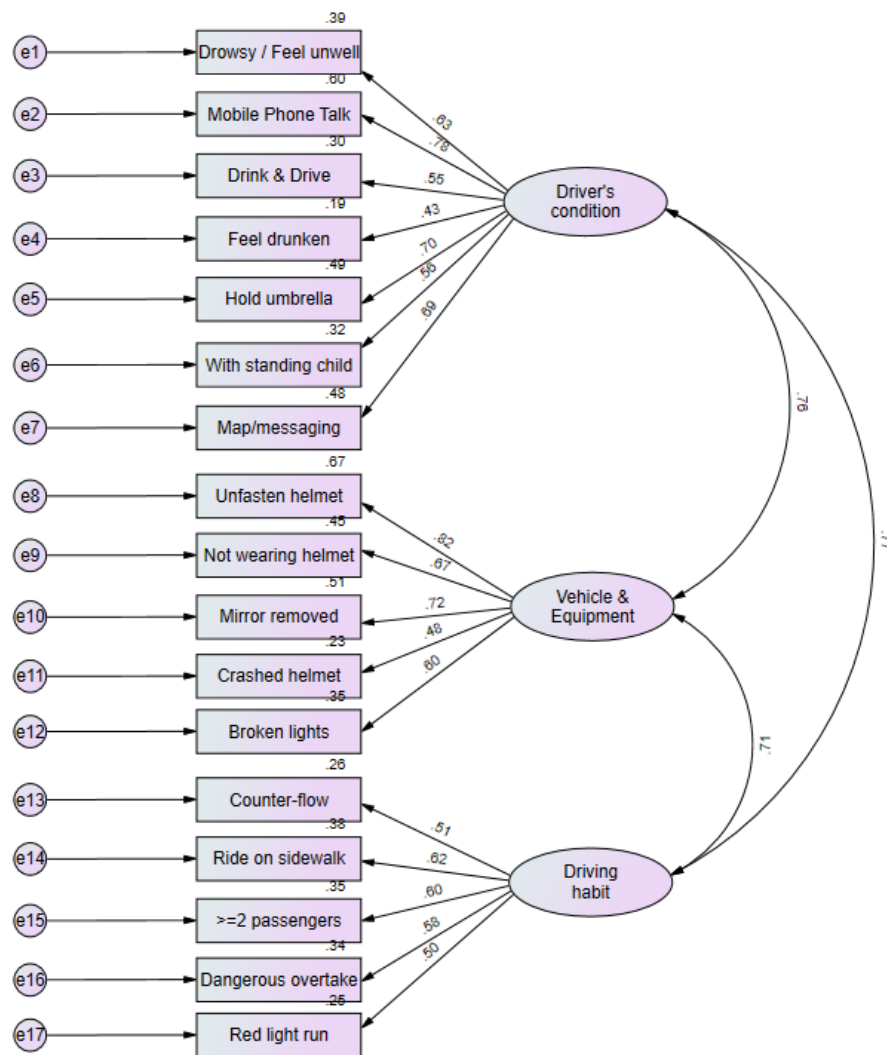
### 2.4.5 Factor Analysis

An exploratory factor analysis (EFA) on 21 measurement items with Varimax rotation extracted five factors, accounting for 55.971% of the total variances. The KMO value was 0.888 ( $>0.8$ ) and the Chi-square value in Bartlett's test of sphericity  $\chi^2$  (df = 210) was 4033.655 with significance at  $p = 0.000$ , indicating that the data was valid for the factor analysis. The varimax standardized factor loadings of each measurement item and Cronbach's alpha of each latent construct are shown in Table 2.1. All variables making up each of these five factors are significant, having values above the 0.50 cut-off. The values of Cronbach's alpha are well above 0.5, indicating reliable scales.

**Table 2.2 Exploratory Factor Analysis**

Latent construct	Measurement Items	Components				
		1	2	3	4	5
Driver's condition	Drowsy, feel unwell	<b>0.770</b>				
	Mobile phone talk	<b>0.615</b>	0.346	0.356		
	Drink and drive	<b>0.610</b>				
	Feel drunken	<b>0.597</b>				
	Hold umbrella	<b>0.578</b>	0.344			
	With standing child	<b>0.548</b>				0.330
	Looking map, messaging	<b>0.522</b>	0.357			
Vehicle & equipment	Unfasten helmet		<b>0.791</b>			
	No helmet		<b>0.768</b>			
	Mirror removed		<b>0.606</b>			0.328
	Use crashed helmet		<b>0.561</b>			0.408
	Lights broken	0.354	<b>0.435</b>			
Driving habit	Counterflow driving			<b>0.675</b>		
	Drive on sidewalk			<b>0.652</b>		
	Passengers $\geq 2$		0.381	<b>0.618</b>		
	Dangerous overtake			<b>0.585</b>		
	Red light run	0.332		<b>0.526</b>		
Socio-economic	Age				<b>0.885</b>	
	Year of driving MC				<b>0.813</b>	
	Income				<b>0.666</b>	0.360
Speeding	Speed $> 90$ kph					<b>0.647</b>

The first factor, named as Drivers' condition, consisted of seven items. The second factor, named as Vehicle & Equipment, consisted of five items. The third factor, named as Driving habit, consisted of five items. The fourth factor, named as Socio-economic, consisted of three items. The fifth factor is explained by the only one item: speed >90 kph. Then, a confirmatory factory analysis (CFA) was conducted on the first three latent constructs, namely, Driver's condition, Vehicle & equipment, and Driving habit, as shown in Figure 2.10. The model fit was within an acceptable range. This confirms the measurement models that was derived from the EFA results.



CMIN/DF=3.013, GFI=.932, CFI=.927, RMSEA =.058

Figure 2.10 Confirmatory Factor Analysis Result

### 2.4.7 Structural Equation Modeling

The EFA and CFA results were used to construct the Structural Equation Model (SEM), as shown in Figure 2.11. The perceived loadings are as follows Driver's condition (0.91), Vehicle & equipment (0.86), Driving habit (0.85), and Fast driving >90 kph (0.29). All parameters are statistically significant at 0.001 level. The latent construct named Perception was found influenced by Age, indicating that the young are less aware of risk. The risk perception on speeding >90kph is the least among the risk factors. Similarly, perception of using helmet safely was also relatively low, as indicated by the low loading for the crashed helmet variable. Many kinds of dangerous driving habit were less perceived: red-light running, counter-flow driving, running on pedestrian sidewalk, having a child stand in front while driving motorcycle, etc.

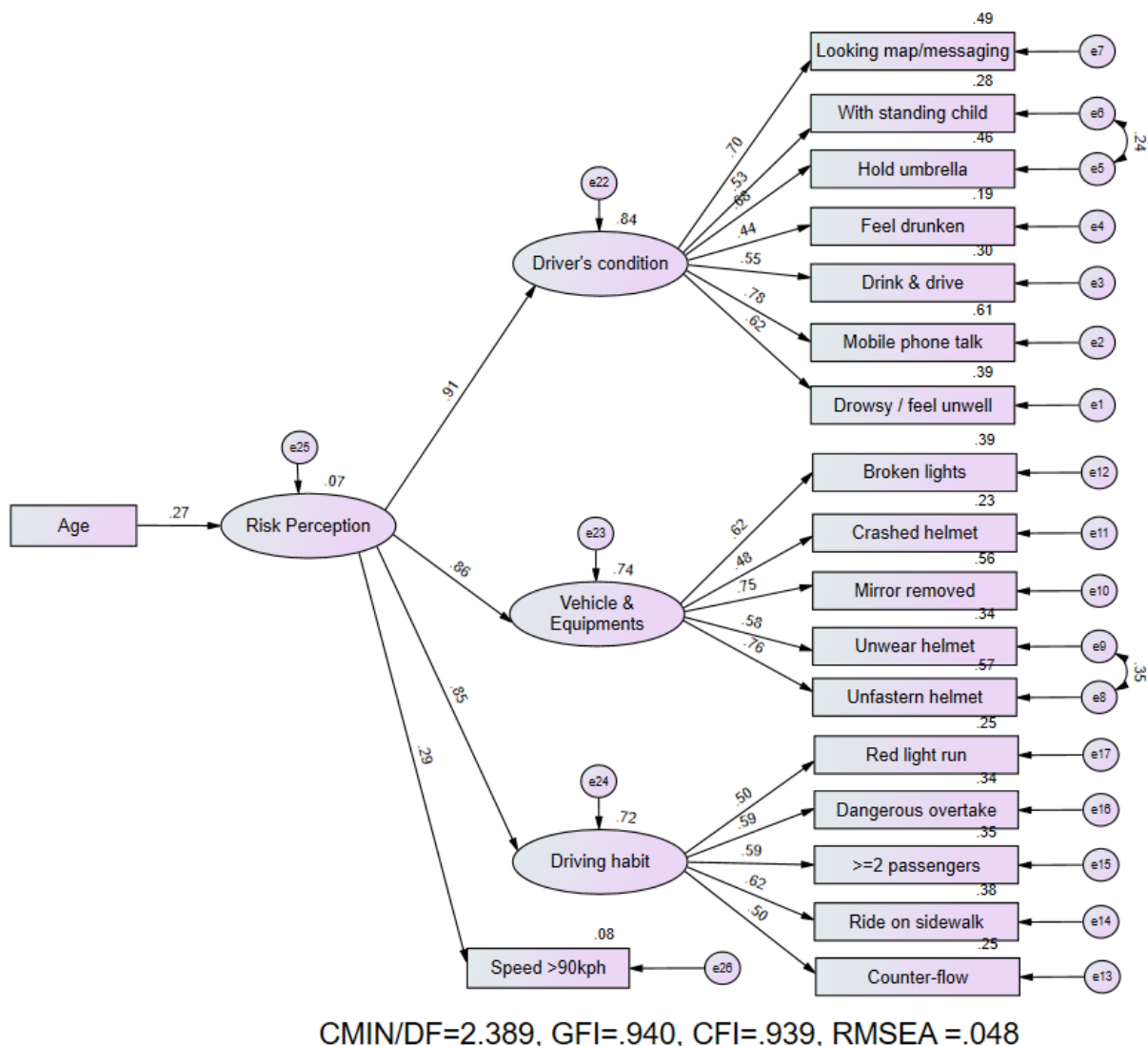


Figure 2.11 Structural Equation Model

The findings are supported by the existing study in Malaysia (Goh et al., 2020) that risk behavior has a significant positive relationship with risk behavior. Regarding pedestrian, a similar study in Vietnam found that safer traffic safety attitudes and higher levels of traffic risk perception are associated with safer behaviors (Dinh et al., 2020).

While a study in India, analyzed using SEM (Gupta et al., 2021) also reported that risky driving is individual's aberrant behavior and young car drivers have risky behavior and reported more violation than older drivers.

## 2.5 Implications

The findings on risk perception regarding motorcycle especially among youngsters clearly indicate an urgent attention to raise awareness on traffic safety, particularly on these matters:

- Speeding
- Drink and drive
- Drunk driver
- Riding with more than one passenger
- Riding with child passenger
- Obeying traffic rule
- Checking of vehicle before starting a journey

This is also supported by a study even in a developed country that motorcyclist safety could be effectively increased by educating the driver to recognize the circumstance and correctly interact with the other road users, especially car drivers, and the poor road conditions and surrounds encountered (Simpson et al., 2015).

## CHAPTER 3      SOCIAL MEDIA ACTIVITIES

### 3.1 Activity Plan

Social media has become an integral part of many people's life, specially the young. Social media was found to be an effective tool to communicate and promote healthy lifestyle and safe working environment in an organization (Laroche et al., 2020). In terms of traffic safety, social media was reportedly utilized for raising awareness of factors affecting traffic safety (Nofal, 2013). For example, there is evidence that Facebook was effectively used to remotely communicate with the truck drivers (Sendall et al., 2018).

According to the findings in the previous chapter, this study established an activity plan to raise traffic safety awareness among the youngsters. The detail of the plan is presented in Table 3.1, comprising of video clip creation and safety discussion. Social media channels were utilized to publicize the activities. In words, short video clips were broadcasted on TikTok and YouTube while traffic safety discussions were organized on Clubhouse.

**Table 3.1 Traffic Safety Activity Plan**

No.	Type	Title	Media Content		
			Driver and vehicle	Driving Behavior & Habit	Pedestrian
1	Short video clip	Short clip Pre-trip inspections:	●		
2	Short video clip	Crosswalk in Thailand		●	●
3	Short video clip	Safely Fast, Smart Ride		●	
4	Short video clip	Safely Walk on Different Roads			●
5	Safety discussion	"Can Traffic Discipline only be created by Heart or by Law?"	●	●	●
6	Safety discussion	"What keep Thailand Road Accidents increased continually: In Viewpoint of JICA Road Safety Experts Perspective"	●	●	●
7	Safety discussion	"What keep Thailand Road Accidents increased: In Viewpoint of Thai Academic and JICA Road Safety Experts Perspective"	●	●	●

### 3.2 Short Video Clips on TikTok

ATRANS media channel was created on TikTok where several short video clips originally created by ATRANS are being publicized, as shown in Figure 3.1. It is accessible from the general web browser [https://www.tiktok.com/@atrans\\_media](https://www.tiktok.com/@atrans_media) or the dedicated application available for free download from Google Play Store and Apple App Store. The TikTok page of ATRANS media is shown in Figure 3.1.

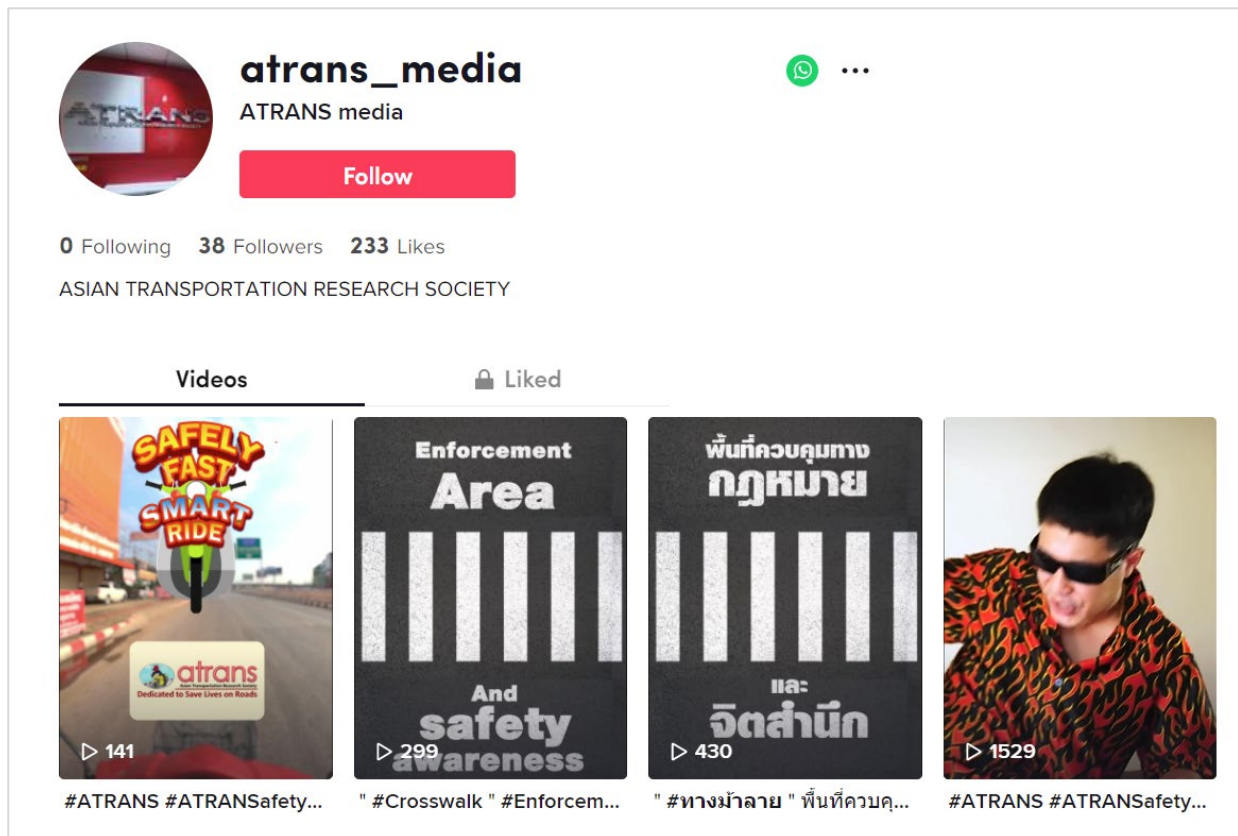


Figure 3.1 ATRANS Media Channel on TikTok



### 3.2.2 Pre-trip Inspection

As a roadworthy vehicle is a prerequisite of safe driving, a short video clip entitled “5 things to do before starting your journey” was created. Five things to check and confirm before starting a journey on motorcycle is presented. Storytelling is made through a rap song, which is breaking ground for traffic safety education and aims to best communicate with the young motorcyclists. The clip has been publicized on TikTok and Facebook. Some snap shots of the video clips are shown in Figure 3.2. The URL is as follows:

[https://www.tiktok.com/@atrans\\_media/video/7010379861843905818](https://www.tiktok.com/@atrans_media/video/7010379861843905818)

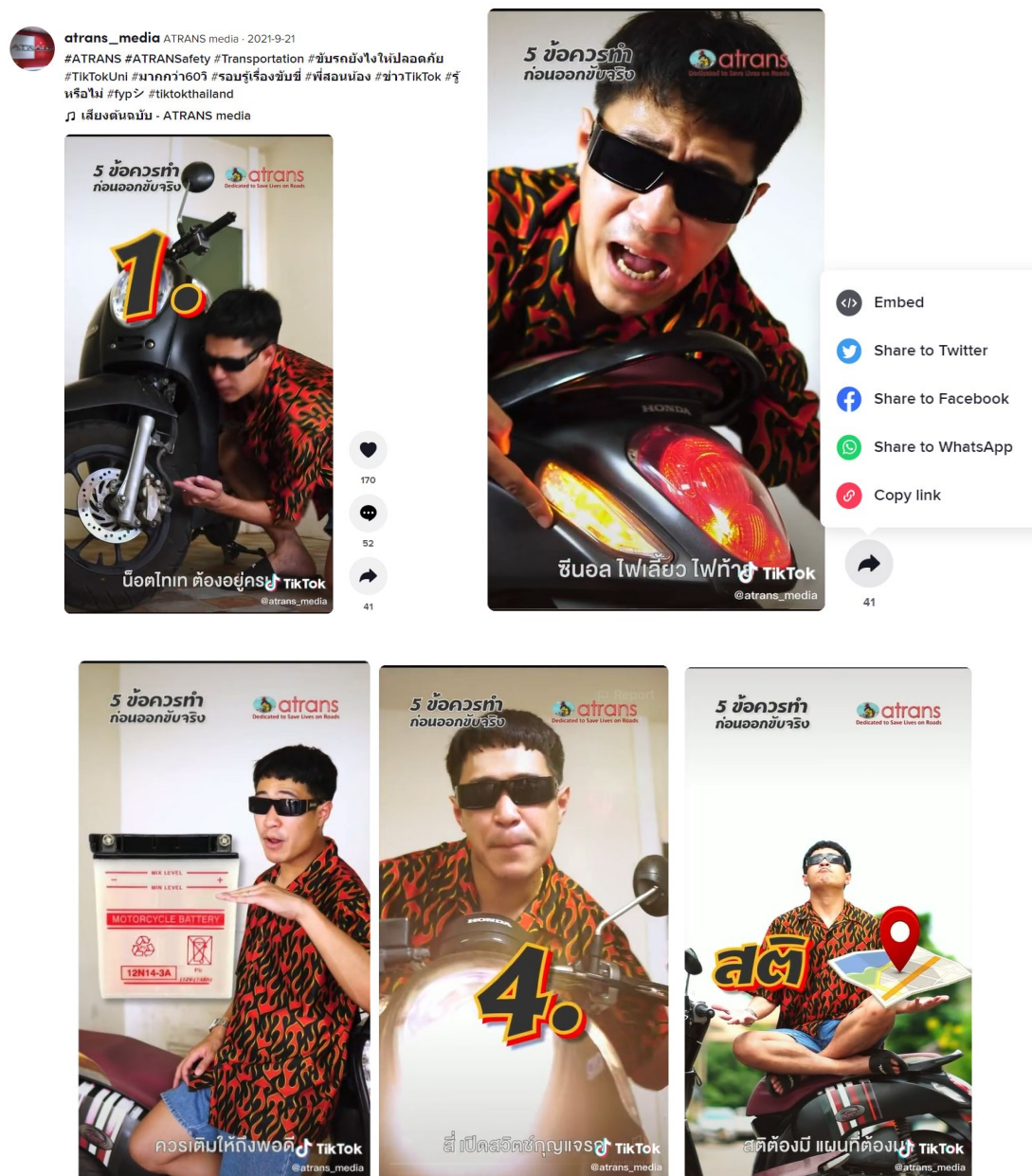


Figure 3.2 Short Video Clip “Pre-trip Inspection”



### 3.2.3 Crosswalk in Thailand

As crashing with pedestrian is one of the frequent accidents on road in Thailand, a short video clip entitled “Crosswalk in Thailand” was created to educate and raise awareness of the drivers to strictly obey the traffic rule to stop at a certain distance and yield to pedestrian. The clip was made in two versions: Thai and English. It has been publicized on TikTok and Facebook. Some snap shots of the video clips are shown in Figure 3.3. The URL is [https://www.tiktok.com/@atrans\\_media/video/7060477743321943322](https://www.tiktok.com/@atrans_media/video/7060477743321943322).

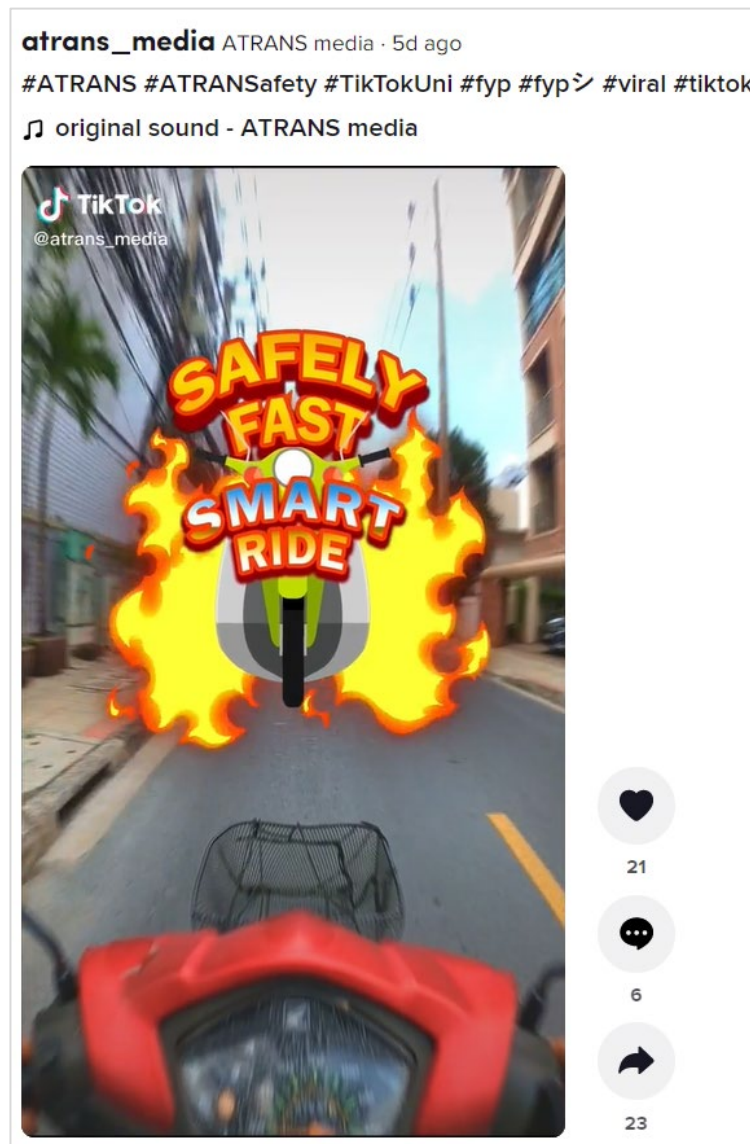


Figure 3.3 Short Video Clip “Crosswalk in Thailand”

### 3.2.4 Safely Fast Smart Ride

As speeding is the primary cause of motorcycle accident, a short video clip entitled “Safely Fast Smart Ride” was created and has been publicized on TikTok. It advises how to ride motorcycle safely by obeying to traffic rules applying to three types of roads: road in the community, road in the urban area, and highway. In addition to speed limit, other tips are presented such as lane usage, safe overtaking, crosswalk, intersection, etc. The video clip is resemble as if playing a game, where player needs to reply to traffic rule questions in order to pass to the next stage. Some snap shots of the video clips are shown in Figure 3.4.

The URL is [https://www.tiktok.com/@atrans\\_media/video/7065227140324707586](https://www.tiktok.com/@atrans_media/video/7065227140324707586)





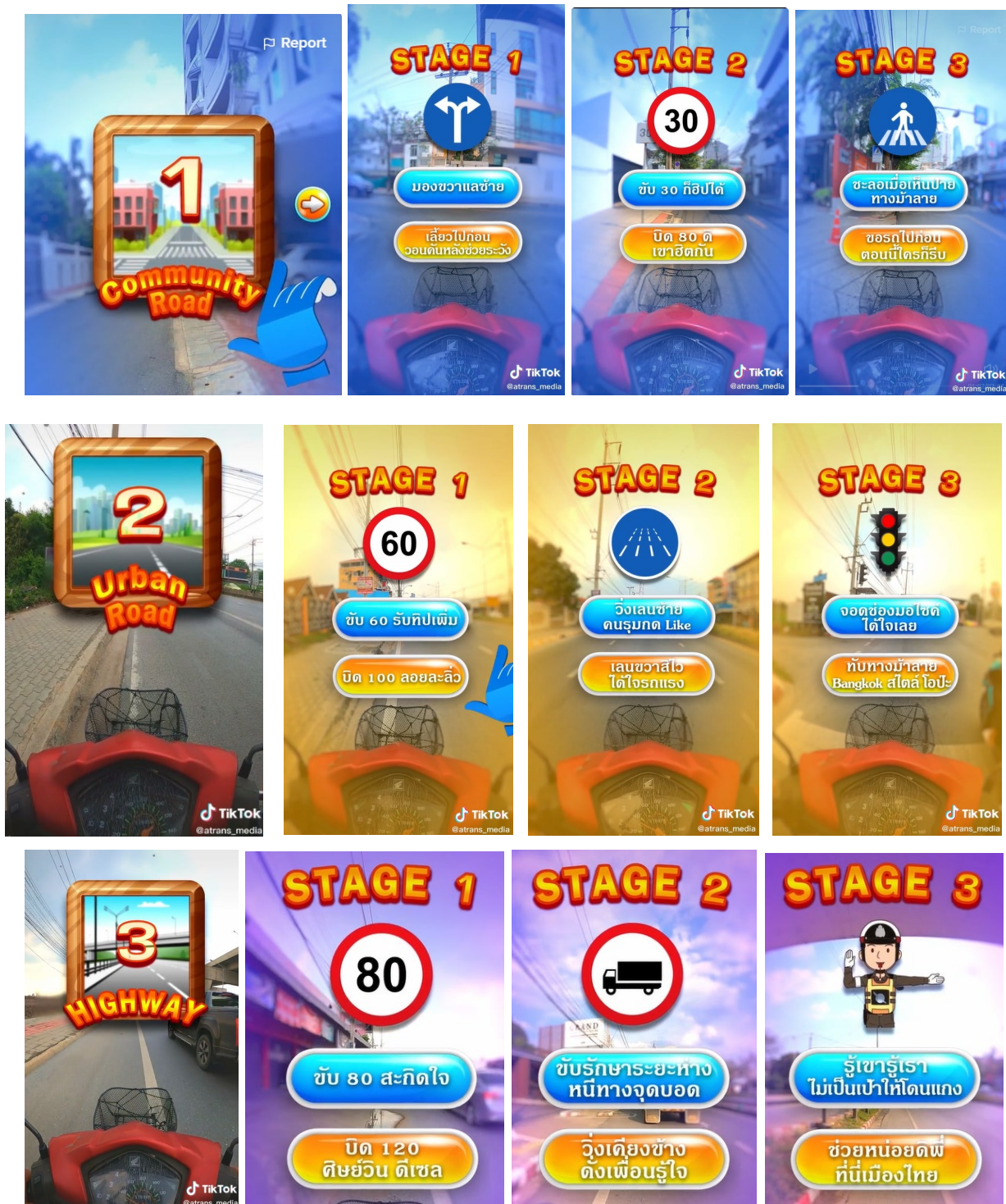


Figure 3.4 Short Video Clip "Safely Fast Smart Ride"

### 3.2.5 Safely Walk on Different Roads

As walking in such developing country like Thailand is not as nice as in Japan, pedestrian should always be aware of unexpected incidents to occur. A short video clip entitled “Safely Walk on Different Roads” was created and planned to be publicized on TikTok and Facebook. Sidewalk of three types of roads were used as cases: perfect walkway, walkway of urban road, and walkway in the rural area. Various precautions are reminded such as presence of opening manhole, uneven surface, be sure to wear light color cloth when walking in the dark, etc. Some snap shots of the clips are shown in Figure 3.5.



Figure 3.5 Short Video Clip “Safely Walk on Different Roads”

For this clip, a cutting-edge technique, so-called face projection mapping, was used to represent different conditions of different road on the actors' face. This innovation was believed to grasp attention from the young generation.



Figure 3.6 Face projection mapping technique



### 3.3 Responses

#### 3.3.1 Social Media Analytics

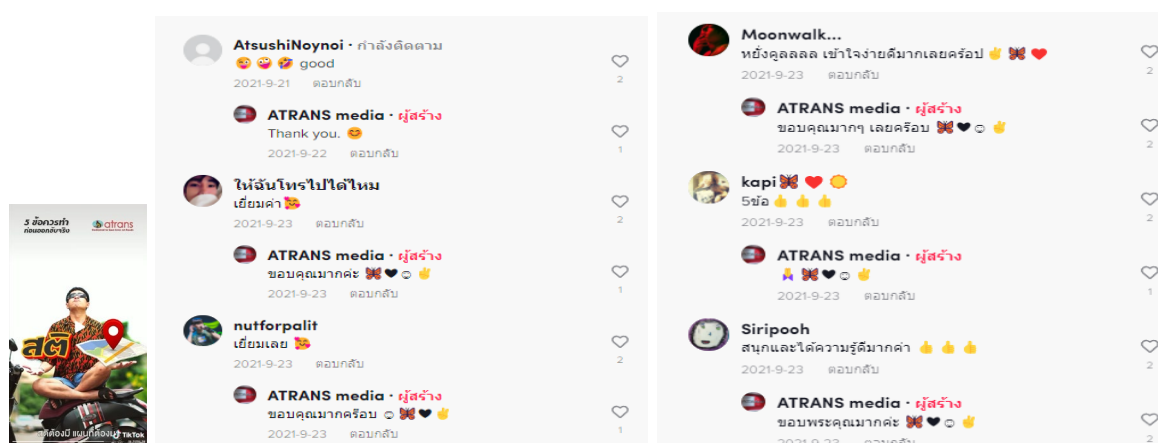
The statistic of each social media on TikTok, Facebook, and YouTube as of March 2022 is summarized in Table 3.2. The numbers of View, Like, and Share quantitatively reflects the degree of acceptance and popularity.

**Table 3.2 Social Media Statistics**

Media Channel	Clip	View*	Like*	Share*	Comment*
TikTok	Pre-trip inspection	1,534	170	41	52
	Crosswalk in Thailand (Thai version)	437	27	24	7
	Crosswalk in Thailand (English version)	304	15	4	-
	Safely Fast Smart Ride	200	22	26	7
Facebook	Safety Discussion Clubhouse	181	11	3	-
	T.2	290	52	12	-
Facebook Live	Safety Discussion #1	41			
	Safety Discussion #2	46			
	Safety Discussion #3	63			

\* Statistics as of March 2022

All comments received are positive and encouraging us to continue such a creative traffic safety education. Example of the comments of the TikTok clips (written in Thai) are shown in Figure 3.7.



**Figure 3.7 Comments on Short Video Clip “Pre-trip inspection”**

### 3.3.3 Feedback Survey

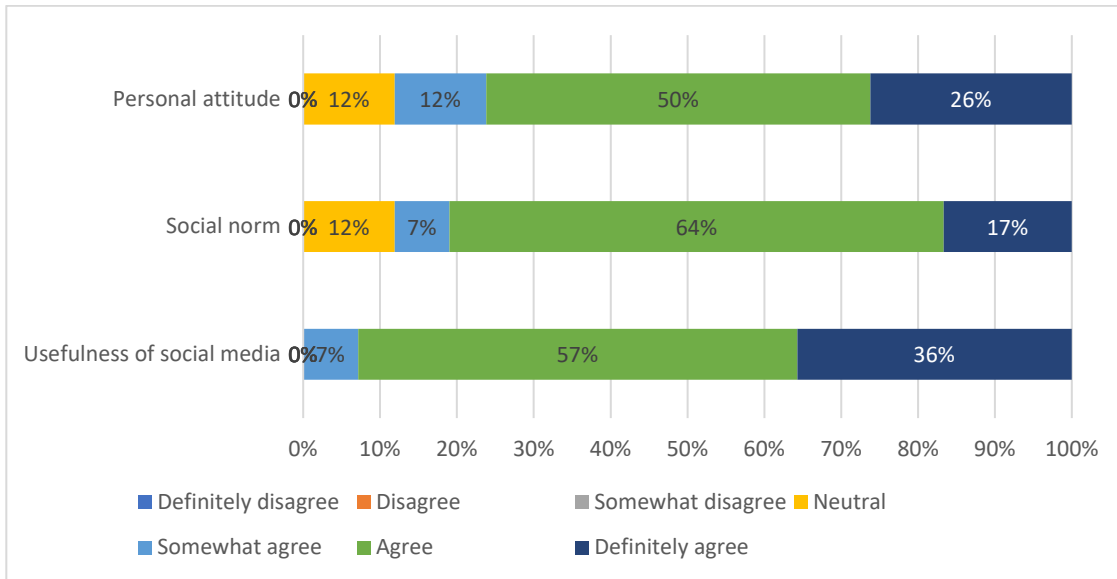
A feedback survey was conducted by asking 42 students, who are young students, aged between 16 and 20 years of two colleges: Thaluang Cementhaianusorn Technical College and SuphanBuri Technical College. They were asked to watch the three short ATRANS-original video clips, provide opinion, and do evaluation that was based on 7-point Likert scale questions. Due to COVID-19 restriction, the survey was fully administered online. The cover page of the online survey is shown in Figure 3.6.



Figure 3.8 Response Survey

#### 1) General Perception on Social Media

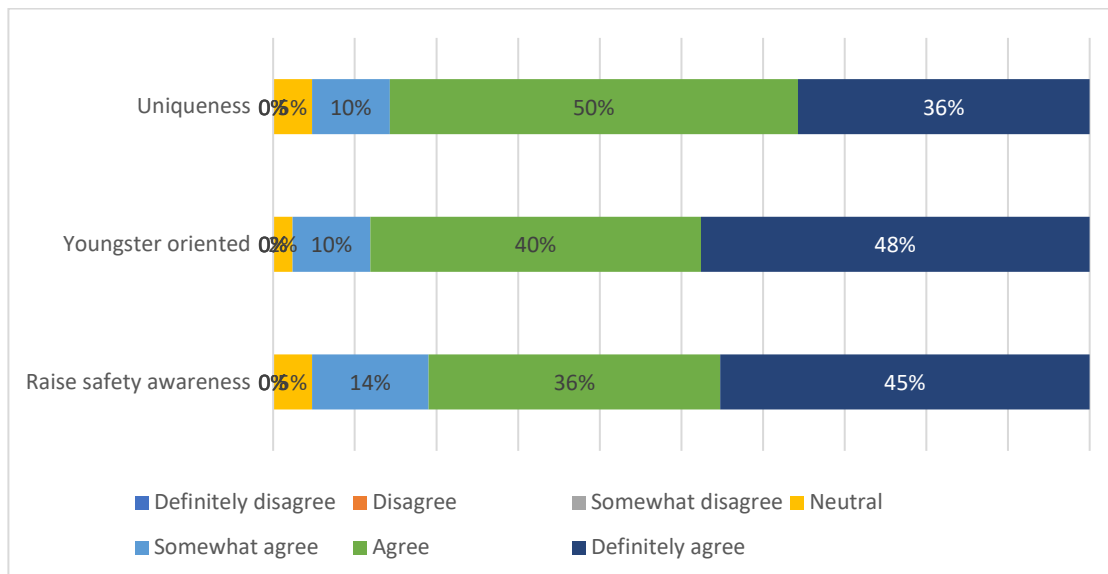
Firstly, they were asked their perception on social media in general. The sample personally agree that social media is influential and useful, so as to their surrounding environment. More than 90% found that social media is useful. This is shown in Figure 3.7.



**Figure 3.9 Perception on Social Media**

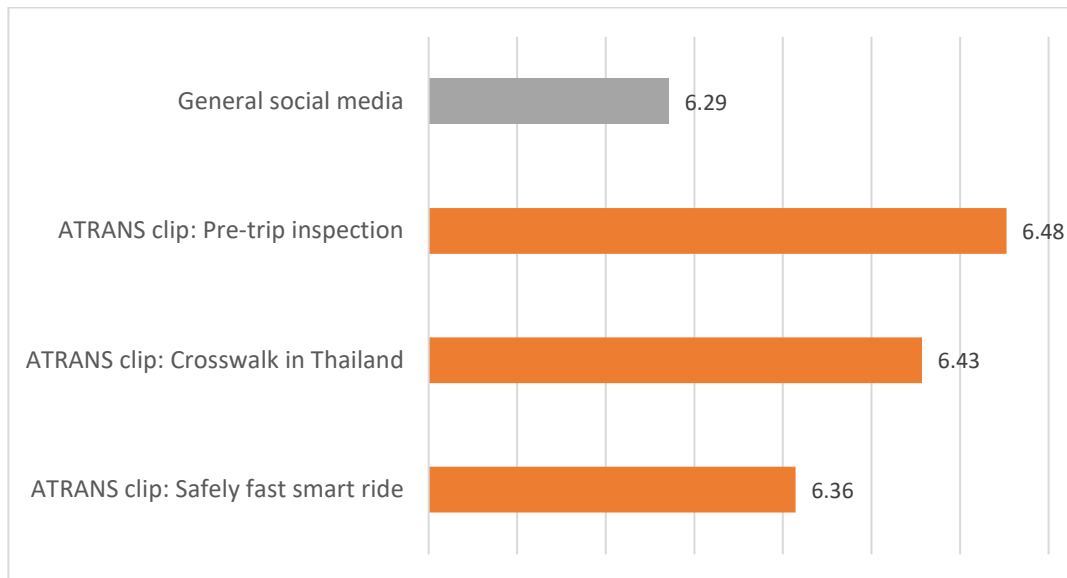
## 2) General Perception ATRANS Media

After watching the three short video clips, the sample generally agree that ATRANS media are unique and distinctive from the other existing media or video clips they have seen. They also found that the clips are youngster-oriented and match their taste and preference. They reported that the clips have helped to raise awareness on traffic safety to some degree. The detail result is shown in Figure 3.8.



**Figure 3.10 General Perception ATRANS Media**

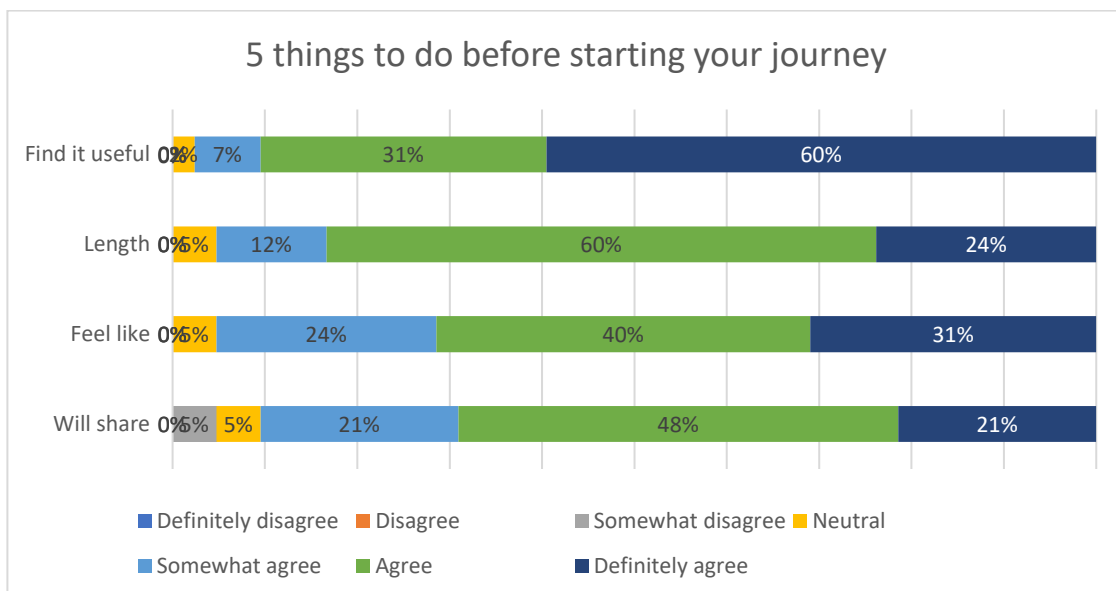
Moreover, by calculating the weighted average score, the result shows that the samples have rated the three ATRANS clips higher than the other generally available clip on social media, as obvious in Figure 3.9.



**Figure 3.11 General Evaluation of ATRANS Video Clips**

### 3) Perception TikTok Clip: Pre-Trip Inspection

The clip “Pre-trip inspection” was reportedly found very useful and tends to be liked and shared, as shown in Figure 3.10.



**Figure 3.12 Perception of TikTok clip “Pre-trip inspection”**



#### 4) Perception TikTok Clip: Crosswalk in Thailand

The clip “Crosswalk in Thailand” was also found very useful and tends to be liked and shared, as shown in Figure 3.11.

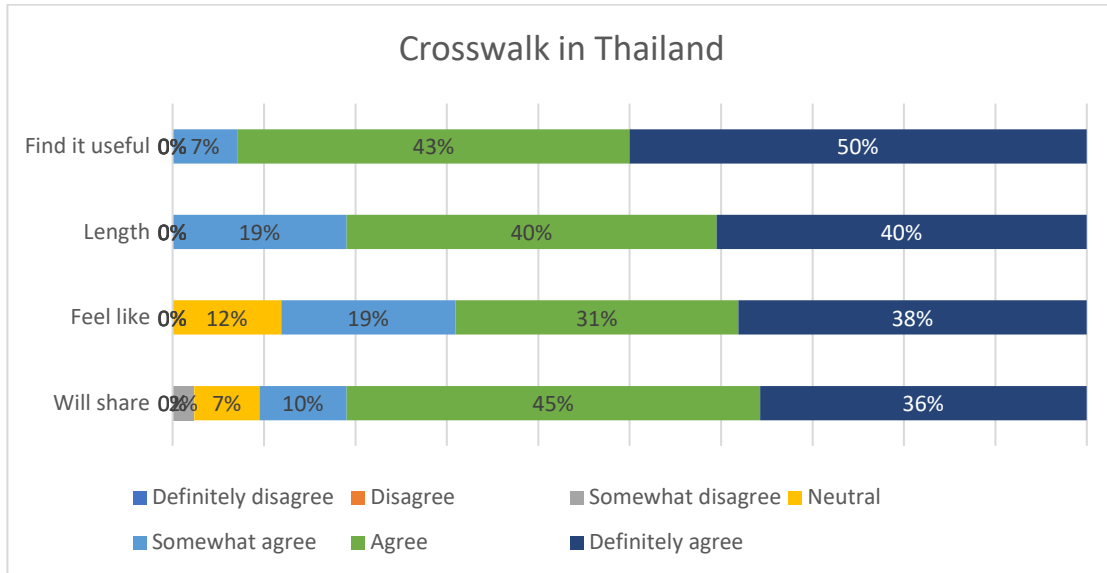


Figure 3.13 Perception TikTok Clip: Crosswalk in Thailand

#### 5) Perception TikTok Clip: Safely Fast Smart Ride

Similarly, the clip “Safely Fast Smart Ride” was found very useful (agree and definitely agree for more than 93%) and tends to be liked and shared, as shown in Figure 3.12.

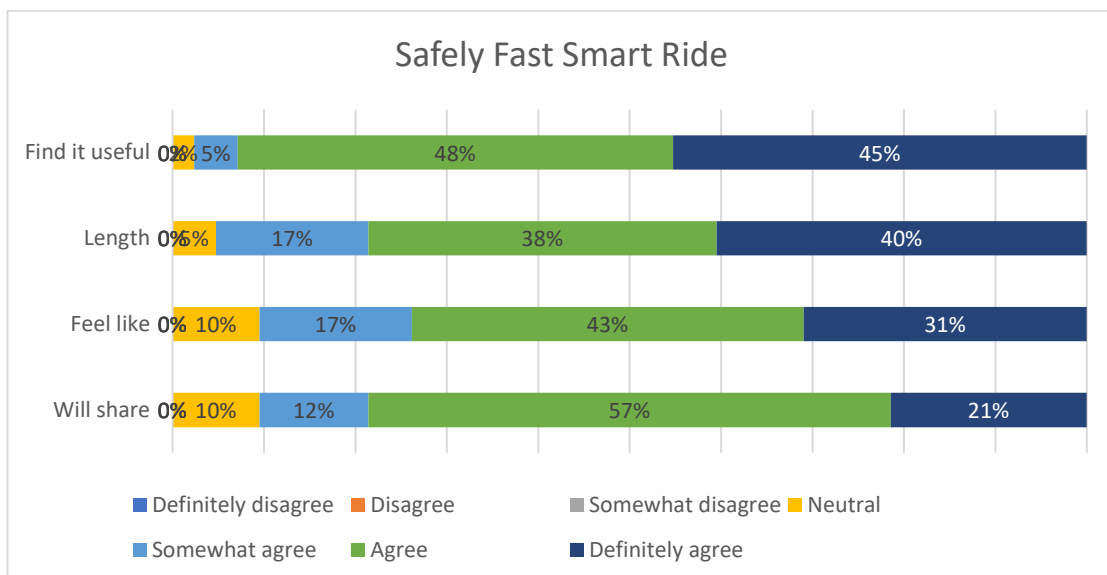
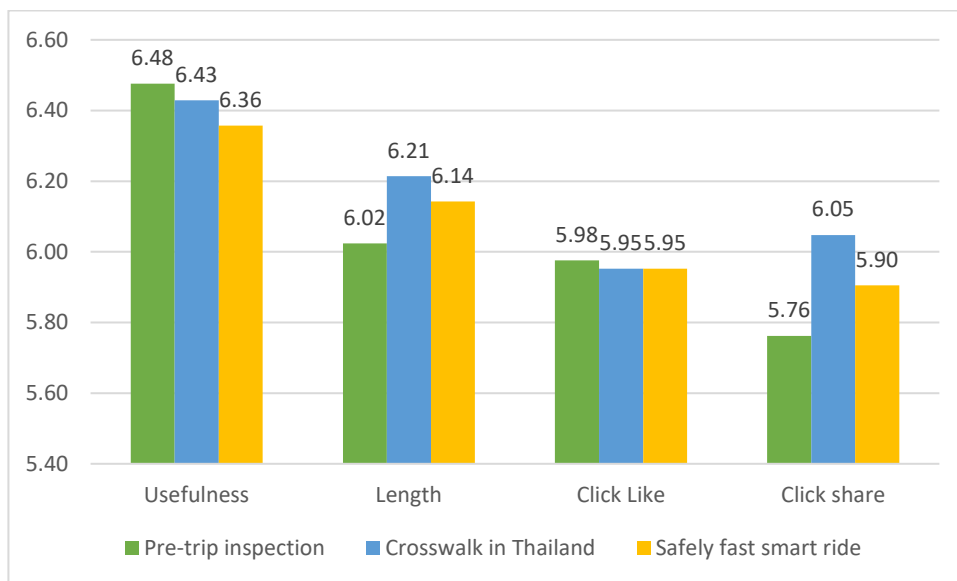


Figure 3.14 Perception TikTok Clip: Safely Fast Smart Ride

## 7) Comparison of the three ATRANS-original clips

The average evaluation scores of each clip are shown in Figure 3.13. In terms of length of the clip, on average all clips are judged satisfied, as the scores are above 5, out of the full score of 7. Although it is long, the clip “Pre-trip Inspection” was judged very useful. The clip “Crosswalk in Thailand” got the highest score both in terms of length and Share score, as it is short and concise. In terms of Like score, all clips are satisfied nearly equally, score of nearly 6.



**Figure 3.15 Comparison of the three ATRANS-original clips**

### 3.4 Traffic Safety Discussion on Clubhouse

A series of traffic safety discussions were organized on Clubhouse.

#### 3.4.1 Can Traffic Discipline only be created by Heart or by Law?

The first traffic safety discussion on a topic “Can Traffic Discipline only be created by Heart or by Law?” was organized on September 7<sup>th</sup>, 2021. Local experts were invited to share their opinions including:

- Mr.Jatupon Thepmungkorn, Deputy Director of Regional Office 12, Department of Highway
- Pol.Col.Jinda Klabklai, Royal Thai Police
- Mr.Tawat Thongpoon, 3M Thailand Ltd.
- Dr. Thawilwadee BUREEKUL, Director of Research & Development Office, King Prajadhipok's Institute
- M.D.Chamaiphun Satikarn, former advisor, WHO Thailand

**ATrans MEDIA**  
**INVITATION TO A DISCUSSION**  
"Can Traffic Discipline only be created by Heart or by Law?"

Join us on  
**Clubhouse**

**Tuesday, 7th, Sep 2021**  
**19:00-20.30PM**

**SCAN HERE**  
TO JOIN OUR CLUBHOUSE

หัวข้อเรื่อง  
"วินัยจราจรสร้างได้ด้วยใจหรือด้วยกฎหมายเท่านั้น?"  
(Can Traffic Discipline only be created by Heart or by Law?)

ผู้ร่วมสนทนา

ผู้ดำเนินรายการ	ผู้ร่วมสนทนา
ดร.ดร. วราเมศวร์ วิเชียรแสน Assoc. Prof. Dr. Varameth Vichiensan	คุณจตุพร ตั้งไพศาลกิจ Mr. Chamroon Tangpaisakitt
ดร.เดียนใจ พุกตะ Dr. Tuenjai FUKUDA	คุณจตุพล เทพมงคล Mr. Jatupon Thepmungkorn
	ผศ.ดร.สิทธา เจนศิริศักดิ์ Asst. Prof. Dr. Siitha Jaensirisak
	พ.ต.อ.หญิง จินดา กลิ่นกลาย Pol. Col. Jinda Klabklai
	พ.ต.ท.ผศ.ดร.ไวยพจน์ กุลราชย์ Asst. Prof. Pol. Lt. Col. Dr. Waiphot Kulachai
	คุณอวิช ทองขุน Mr. Tawat Thongpoon, (3M)
	คุณสิริวรงค์ แซ่ลื้อ Mr. Siwawong Sae-lor (Social Media Expert)

Organized by Asian Transportation Research Society, Research Project: Q05-2021

Figure 3.16 Clubhouse Traffic Safety Discussion: Local Perspective

The discussion was very fruitful and came up with a conclusion that a rigid traffic law alone cannot truly make a traffic discipline that looks to be a rather heart-oriented matter. Giving traffic safety education from the early time of childhood will stimulate safety

consciousness and sustainably raise awareness and responsibility of safe driving. However, for the time being, traffic rule-induced discipline will be the only promising solution in this situation. The starting point is the driver's licensing system. Proper education must be provided and ensure that drive can drive and interact safely with other vehicle and pedestrians on the public roads. Moreover, not only the driver's behavior will solve the traffic accident problem, but safe road infrastructure is also an important element to achieve at safe traffic environment. This idea is so-called a safe system approach, where road and traffic systems are safe despite of human fallibility.

### 3.4.2 What keep Thailand Road Accidents Increased Continually?

A traffic safety discussion on a topic "What keep Thailand road accidents increased continually: In viewpoint of JICA road safety experts' perspective". The first event was organized on November 4<sup>th</sup>, 2021 when three JICA experts were invited to share their opinion:

- Mr.Michimasa Takagi
- Mr.Tetsushi Irie
- Mr.Manabu Ohno

**ATRANS MEDIA CLUBHOUSE**  
INVITE YOU TO JOIN A DISCUSSION ON  
**"What keep Thailand Road Accidents increased continually: In Viewpoint of JICA Road Safety Experts Perspective"**

**Thursday 4<sup>th</sup> Nov 2021**  
**19:00-20:30**  
SCAN HERE TO JOIN OUR CLUBHOUSE

**JPN Speakers**  
 Prof. Dr. Atsushi FUKUDA  
Nihon University, Japan  
 Mr. Michimasa TAKAGI  
JICA Project Team Leader  
 Mr. Tetsushi IRIE  
JICA Expert, Database & Macro Analysis  
 Mr. Manabu OHNO  
JICA Expert, Commercial Vehicle Safety

**TH Speakers**  
 Assoc. Prof. Dr. Sorawit Narupiti, CU  
 Asst. Prof. Dr. Sittha Jaensirisak, UBU  
 Assoc. Prof. Dr. Varameth Vichiensan, KU  
 Asst. Prof. Dr. Paramet Luatthep, PSU

**Moderators**  
 Assoc. Prof. Dr. Varameth Vichiensan, KU  
 Dr. Tuenjai FUKUDA  
ATRANS Secretary-General & JICA Project Advisor

**Text Content:**  
 Traffic ends more lives prematurely in Thailand than strokes, Aids, any single kind of cancer, pneumonia, or diabetes. Imagine that a number of 24,000 road fatalities a year, this is equivalent to a number of populations in a small city.  
 Last year there was a prompted COVID-19 pandemic lockdown with the government postponing the Songkran holidays, also known as "seven dangerous days, resulting in a reduction of road fatalities drastically. However, the number of fatalities returns to increase to its usual number ever since its reopening of the restricted areas.  
 The causes of accident over the past several months point towards the recklessness of drivers, and Thailand's unsafe road designs which generate blind spots that can cause road accident occurrence, but whether there are limited to only these 2 factors.  
 A study conducted by the TDRI in 2016 found that traffic deaths resulted in 1.5 billion Baht in economic losses. No matter how intervention countermeasures the government tried to implement to make Thailand's roads safer, in preventing unnecessary losses of those road fatalities, adversely affected the economy for the whole nation, there are some things that keep Thailand Road Accidents increased continually. It is interesting to hear what the road safety experts from Japan would say in their perspective.

Organized by Asian Transportation Research Society, Research Project: 004-2021 and 005-2021

Figure 3.17 Clubhouse Traffic Safety Discussion: JICA Experts' Perspective (I)

The second event was organized again on November 27<sup>th</sup>, 2021. This time we invited six JICA experts to share their view and opinions:

- Mr.Michimasa Takagi
- Mr.Ken Nishino
- Mr.Tetsushi Irie
- Mr.Takeshi Matsunuma
- Mr.Hisanari Ushirooka
- Mr.Kenshiro Tanaka



**Figure 3.18 Clubhouse Traffic Safety Discussion: JICA Experts' Perspective (II)**

From the viewpoint of the JICA experts, dangerous driving behavior and undereducated drivers are the root causes of the traffic accident in Thailand. This is because traffic safety education has not been realized since the childhood period. As a consequence, the number of traffic accidents in children are large, especially when crossing road or while walking on road. For the youngsters or teenagers, speeding is the primary cause of motorcycle accident. Therefore it is an urgent need to pay attention to road safety education seriously otherwise the traffic accident will not start to decline but continue continually.



## **CHAPTER 4      CONCLUDING REMARKS**

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### **4.1 Traffic Safety Awareness**

This study has identified factors influencing traffic safety perception among the risk-taking youngsters and youth motorcycle drivers. It has underlined the needs of traffic safety education focusing on driving behaviors to eliminate the human errors that would be major causes of traffic accident. The goal is to raise the traffic safety awareness and consciousness among young generation drivers in Thailand.

### **4.2 Social media**

As social media has unavoidably an integral part of our life, it has been proved to be an efficient communication channel, especially among the youngsters. This study has demonstrated the real utilization of social media as part of the traffic safety education. A few short video clips were created and publicized through various social media channels including YouTube, TikTok, and Facebook. Safety discussion meeting were organized via Clubhouse. These were aimed to better communicate with the young generation who are familiar with computer technology and social media communication. A preliminary feedback evaluation was found satisfactory and supports our idea to proceed and magnify the effectiveness and usefulness of the activity. It is highly recommended that the similar activities to be carried out continuously in the next phase of the study.

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